AN INVESTIGATION INTO THE ATTITUDE OF TEACHERS TOWARDS THE NEW SYSTEM OF INSPECTION BY SUBJECT INSPECTORS IN MYSORE STATE

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CHAPTER-I

INTRODUCTION

Historical Background

The present system of school inspection in our country has its origin in the Wood's despatch of 1854. The introduction of grant-in-aid system as recommended by the Wood's despatch necessitated the appointment of inspectors of schools to see that the grants received by schools were spent in accordance with the rules laid down by the education department from time to time. This type of inspection was more concerned with administrative control rather than with the academic improvement of schools. This has been pointed out by several commissions and committees. The Secondary Education Commission (1952-53) stated in its report "It was pointed out by several witnesses that inspections were perfunctory, that the time spent by the inspector at any particular place was insufficient, that the greater part of his time was taken up with routine work."[1] It may be pertinent to quote in this context from the report of the Education Commission (1964-66): "Supervision is, in a sense, the backbone of educational programme. Unfortunately the programme of supervision of schools has largely broken down in most States for several reasons such as:

1) the large expansion in the number of institutions which has not been accompanied by a corresponding increase in the number of inspecting officers.

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1. The Secondary Education Commission Report, Government of India, Ministry of Education, 1953. p. 149.

2) the combination of administrative and supervisory functions in the same officer which affects supervision adversely because administrative work, which has increased greatly in recent years, always has a priority.

3) the use of supervisory officers, when they are members of block development team, for non-educational work leaving them very little time for their own responsibilities.

4) Continuance of old techniques of supervision oriented to control rather than to development and

5) lack of adequate competence in the inspecting staff.

One of the major programmes in the reform of school education is to overcome these difficulties and to create the new system of supervision.[1]

It is quite evident from the above observations that in spite of muckraking criticism "hardly any improvement could be affected in the inspection system which could be helpful for improving the instruction in the schools."[2]

The Changing Concept of School Inspection

The traditional concept of school inspection has undergone a significant change in recent years. The modern concept does not merely confine inspection to the administrative aspects of schools but lays greater emphasis on the improvement of teaching learning process through direction, guidance and training of teachers. Modern inspection implies better supervision

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1. The Education Commission 1964-66, Government of India, Ministry of Education, 1966. p. 264.

2. Project report - XII-[illegible] 024, National Institute of Education (NCERT), New Delhi-16, 1966. p. 8.

which is restricted not only to giving suggestions and directions through occasional visits by inspectors but "is the effort to stimulate, coordinate and guide the continued growth of teachers, both individually and collectively in the better understanding and more effective performance of all the functions of instruction so that they will be better able to stimulate and direct each student's continued growth toward rich and intelligent participation in society. The whole purpose of supervision is the development of better education for youth."[1]

Modern inspection envisages the role of a school inspector as a friend, philosopher and guide. The inspector is expected to help teachers improve their professional competences. He is expected to build their morale by virtue of his rich scholarship and varied experience.

A very comprehensive concept of inspection can be found in UNESCO's pamphlet on "School Inspectors." It clearly defines the scope of inspection and the duties of inspectors. "Inspection is a cooperative endeavour in which all teachers participate and where the inspector is the education leader and acts as stimulator, guide and consultant, not as a critic or dictator however benevolent. In relation to educational matters he assists teacher with his professional problems, he examines, in collaboration with the parties concerned, the educational methods, programme, the distribution of duties, time-table; he helps to organise study groups, encourages professional reading

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1. Douglass, Hart R.; Bent, Raidy K.; and Broadman Charles S. "Democratic Supervision in Secondary Schools." Houghton Mifflin Co., Boston, 1961. p. 6.

and actively; supports other forms of in-service training; he encourages experimental work of various kinds and spreads amongst the teachers ideas useful to the achievement of this aim."[1] In other words "the purpose of inspection in an age of democracy is the improvement of instruction."[2] It is an expert technical service primarily concerned with studying and improving the situations of learning, teaching as well as pupil growth. It is an active cooperative enterprise of both inspectors and teachers who try to acquaint themselves with the problems of one another and work in a team spirit.

As such, in order to make the supervision more efficient, it is quite obvious to think of separate supervisory machinery exclusively meant for the improvement of instruction and other related academic problems. This has been rightly pointed out by the Education Commission (1964-66). "One important recommendation i.e. separation of administration from supervision has already been made and we have suggested that the District School Board should be largely concerned with the former and the District Education Officer and his staff, with the latter. These wings should work in close collaboration. When differences arise, the last word will lie with District Education Officer who will have a higher status or with the Director of Education. Under this arrangement it will be possible for the District Education Officer and the staff concentrate on supervision

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1. Quoted in Project Report - MIE New 004, National Institute of Education (NCERT), New Delhi-16, 1966. p. 11.

2. Mukerji, S.N. Secondary School Administration, Acharya Book Depot, Baroda, 1963. p. 57.

proper i.e. on improvement of instruction, guidance to teachers, organisation of their in-service programmes and provision of extension services to schools."[1]

The Present Practices of Supervision

Though there is sufficient awareness about the modern concept of inspection among administrators and educators, very little effort has been made to change the traditional practices of school inspection which involves a single individual to carry out the entire inspection including its administrative, financial and academic aspects. Because of heavy administrative responsibilities, he hardly finds time for the academic guidance. Besides, one individual inspector is not expected to have knowledge of all school subjects. The introduction of many diversified courses in the secondary schools demands more subject specialists.

Realising the importance of the inspection in the field of education, administrative and academic supervisions were separated in some of the States like Delhi, Andhra Pradesh, Mysore and quite recently in Maharashtra, for the purposes of improving the quality of instruction. As a result of this, the system of school inspection by a team of subject specialists called Subject Inspectors came into being in Mysore State in 1961. This team of subject inspectors is purely concerned with the academic work.

Need for the Study

There are twenty educational districts in Mysore State. These are broadly grouped into five divisions, each division

1. The Education Commission 1964-66. op. cit. p. 264.

consisting of four districts. For each division there is one Divisional Deputy Director who is responsible for the overall administration of education in the division. He has to perform administrative as well as supervisory duties. A team of subject inspectors is attached to the office of the Divisional Deputy Director who is the chief of the team. Apart from the Deputy Director as the leader of the team, it includes one inspector for English, one for regional language, one for humanities, one for science and mathematics and one for physical education. These persons are drawn from among the experienced headmasters of secondary schools and from the teacher training colleges.

The team of subject inspectors along with Deputy Director as their leader and coordinator visits the secondary schools according to the schedule and conducts a thorough inspection of each school. The subject inspectors are expected to supervise 50-60 schools in a year. Generally, they supervise schools every alternate year. At some places it is not even possible for them to inspect all the schools in alternate years. For example, there are 244 high/higher secondary/Multipurpose schools in Gulbarga Division and if according to rules the inspectors are expected to inspect 50-60 schools in a year, a particular school is likely to get a chance for inspection once in four years.

However, the system of inspection by the subject specialists is a land-mark in the history of inspection and supervision. As it has been in practice for the past eight years in Mysore State and is meant only for improving the instructional programme, it will be interesting to know whether this new system

has brought about any significant change in the teachers' attitude towards inspection.

Hence the need for the present study.

Aims and Objectives of the Study

The specific objectives of the study are as follows:

1) To find out, in general, the attitude of teachers towards the existing system of school inspection by subject specialists.

2) To ascertain whether teachers' attitude towards school inspection by subject specialists differs with sex, age, qualifications, experience and the subjects taught.

Delimitations of the Study

Gulburga division is one of the five educational divisions in Mysore State. There are four districts in it namely Bellary, Gulburga, Bidar and Raichur. This study is confined to the secondary schools of Bellary and Gulburga districts. Out of 146 high/higher secondary/multipurpose schools in these two districts, about 50 secondary schools were chosen for the purpose of the present study.

The study is restricted to the graduate teachers, language pandits and munshis of secondary schools only. Physical education teachers and teachers who do not teach high/higher secondary school classes are not included in the sample for this study.

Again, the study is delimited to measuring the attitude of teachers teaching high/higher secondary school classes, towards the system of inspection by subject inspectors who are exclusively meant for supervising academic work. Hence the administrative and financial aspects of inspection are not taken into consideration in this study.

C H A P T E R - II

REVIEW OF RELATED STUDIES

Many studies have been conducted on inspection and supervision in this country as well as in other countries. In India, most of the studies are at M.Ed. level. Because of the shortage of time and money at his disposal, the investigator was able to review the studies undertaken mostly in Delhi. The list of related studies conducted on the subject from 1956 to 1961, as compiled by the NCERT has, however, been given in Appendix I. Brief review of the studies conducted in Delhi are presented below.

The first study[1] entitled "Attitude of Teachers Towards Inspection" was made by Mrs. K. Parimoo in the year 1950-51. The investigator developed a questionnaire containing 250 items and administered it on teachers of 5 girls' and 6 boys' higher secondary schools of Delhi. In addition to the questionnaire, interviews with teachers were also conducted. Main findings of this study are as follows:

1) 87 per cent of the replies revealed that the schools are visited by inspectors once in a year. In some instances, though rare, no inspections are held. In ten per cent cases more than one inspection a year is reported to be held.

2) Very often the inspection visits are paid hurriedly leaving their finger prints only in the log books which do not have the good fortune to reach the rank and file of teaching staff.

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1. Mrs. K. Parimoo. Attitude of Teachers Towards Inspection. Unprinted M.Ed. Dissertation, Central Institute of Education, Delhi, 1951.

3) Snappy and hasty judgements resulting from a brief visit to a school are a source of dissatisfaction among teachers.

4) The inspection system has failed to realise the practical difficulties of teachers.

5) There is a tendency on the part of supervisors to emphasise on checking the written work.

6) Inspectors are authoritarian in their outlook.

7) About 23 drawbacks regarding supervision system have been listed. Some of the drawbacks are:

a) Inspection period is short.
b) Inspectors generally have a fault finding and unsympathetic attitude.
c) There is a lack of encouragement and appreciation on the part of inspectors.
d) Inspectors are authoritarian.
e) They do not meet the peculiar difficulties of teachers, and are non-cooperative.
f) Specific suggestions are not given by inspectors.
g) Inspectors do not convene teachers' conferences.
h) There is lack of self-evaluation on the part of the inspectors.
i) They fail to keep the prestige of teachers before the pupils.

8) Teachers want their inspectors to be friendly, kind, sympathetic, cooperative, helpful, of magnetic personality, democratic, cheerful, congenial, patient, impartial, open to conviction, long experience of actual teaching of subjects and classes expected to inspect, a mastery over the subject matter, and ability to judge the work of teachers in consideration of their peculiar circumstances.

Another study[1] was carried out by Santosh Bhatnagar during 1954-55. The title of the study is "An Investigation

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1. Bhatnagar, S. An Investigation into the Supervisory Services of Secondary Education in Delhi, Unpublished M.Ed. Dissertation, Central Institute of Education, Delhi, 1955.

into the Supervisory Services of Secondary Education in Delhi." In order to collect the data the investigator made use of the techniques of questionnaire and interview. The following are the results of the study:

1) 78 per cent of the teachers' replies indicate that the inspectors observe too much the responsiveness of pupils. Discipline and assignments are given too much importance.

2) Inspection is held once in a year. School visit is only one aspect of supervision. This aspect is given too much importance by the Department of Education.

3) Teachers realise the importance of demonstration lessons. They also feel that if the inspectors give specific suggestions regarding teaching techniques, they would be most helpful. Teachers consider the departmental circulars and log book remarks, on which the department lays much emphasis, as least important.

4) 12 per cent of the teachers feel that inspections are not planned properly.

5) The most important characteristics of inspection given by the pretty large percentage of teachers are that it is imposed from above, it is random, haphazard and is done with a view only to visiting the school. Self-expression is hampered. In short it is absolutely authoritarian and undemocratic. No creativity among the teachers is encouraged. The teachers are not treated as equals.

6) Teachers want guidance from inspectors in many practical problems. The most important of them being "how to give individual attention to the pupils in the big classes" and "how to do too much of correction work."

7) Teachers seem to be weary of the critical, fault finding and bossing outlook of inspectors.

8) Teachers expect the supervisor to be a friend, philosopher and guide.

9) Heads of the institutions feel that supervisory services are inadequate and not upto the standard.

10) Inspection needs drastic changes. Very little advice is given to the teachers after inspection.

11) The Department is not much alive to the training activities.

The third study[1] is by Gyan Chandra. The scope of this study is restricted only to the senior basic schools of Delhi Municipal Corporation. The popular techniques of questionnaire and interview were used to collect the data.

The investigator found that the schools were hardly visited by the Education Officer and the Deputy Education Officer. It is only the inspectors who visit the schools and the average frequency of these visits per school is merely two in a year.

Under the heading "Supervisory Activities" it is reported that the teachers are prepared to listen to the suggestions of supervisors if they are given properly. Any correction or suggestion made in the class is highly resented. The teachers do not want their work to be adjudged merely on the basis of their diaries and the reports of the principals. They rather wish their contribution to the entire working of the school to be considered along with their teaching efficiency.

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1. Gyan Chandra. An Investigation into the Senior Basic Schools of Municipal Corporation, Central Institutes of Education, Delhi, 1968.

The teachers expect from a supervisor that he should respect and guard their prestige. He should act as a friend, philosopher and guide and not as a boss. He should keep himself abreast of the latest developments in the field of education. He should give demonstration lessons now and then.

A comprehensive study[1] was undertaken on this subject during 1964-66 by the NCERT. The study is better known as NIE-NCERT Project 304. All the States and the Union Territories in India were covered in the study. The major objective of the study was to develop a set of evaluative criteria and evaluative instruments for the inspection and supervision of secondary schools. The study was carried out in two phases. The first phase is concerned with the identification of evaluative criteria by surveying and analysing the current inspection and supervisory practices as prevalent in different parts of the country whereas the second phase is concerned with developing the evaluative criteria and evaluative instruments and their experimental try-out and finalisation.

Justifying the need of the study, the report states that the educational objectives in India have changed, the conditions in the schools have also changed but the inspection procedures have remained unaltered. The inspectors and other officers concerned with inspection and supervision are so overburdened with other work that it is not possible for them to perform this improvement task, in a reliable and objective manner.

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1. NIE-NCERT Project 304 - Evaluative Criteria for Inspection and Supervision of Secondary Schools, National Institute of Education, New Delhi, 1966.

The present practices of inspection have been analysed in the report under the following headings:

1) An analysis of inspection proformas as being used in different States/Union Territories.

2) An analysis of a sample of inspection reports from different States/Union Territories.

3) An analysis of some educational codes as are being used in various States/Union Territories.

4) A study of the expectations of inspecting officers, managers of schools, principals and teachers regarding inspection and supervision of secondary schools.

5) A study regarding inspecting officers' service conditions and workload.

6) A study of some salient practices in some of the selected schools of Delhi.

The following conclusions have been drawn on the basis of analysis of inspection reports:

1) Mostly the inspecting officers try to evaluate a particular teacher teaching a particular subject in a particular class.

2) Any single report hardly includes all those points which are necessary for a proper evaluation of a particular aspect of the school.

3) In the present reports less weightage has been given to the functional point of any school aspect. Major emphasis has been given to factual data.

4) The inspecting officers of the different States present the report under different sub-heads as prescribed by the State Government. In many cases it has not been properly defined as to what the inspector should look for in the school to fill the points in a particular sub-head.

5) The reports regarding the teaching of subjects are not based on certain defined heads so as to make them more comprehensive, meaningful and valid.

6) This analysis indicates that as regards civics, geography, social studies, commerce, drawing, agriculture, logic, physical education and psychology, very few inspecting officers have given their suggestions in the reports.

Analysis of expectations of principals and teachers reveals that:

1) There should be a panel system of inspection consisting of teachers of training colleges, principals/headmasters and senior teachers of high/higher secondary schools.

2) Before evaluating the teacher, the inspector should discuss with the headmaster.

3) Inspecting officer should deal with the teacher as a friend, guide and helper.

4) Subject experts should be made responsible for inspecting the class-room teaching and more time should be devoted for this purpose.

5) Inspecting officers or panel of inspectors should try to evaluate a particular subject as a whole as being taught in a particular school besides evaluating a particular teacher teaching a particular class.

Finally, in the light of all the studies mentioned earlier a set of evaluative criteria and evaluative instruments have been developed, comprising the following areas:

1) General Data.
2) School Plant.
3) School Administration and Staff.
4) Funds and Finance.

5) Instructional Materials
   a) Library b) Audio-visual Aids.
6) Co-curricular Activities.
7) School and Community Relations.
8) Science.
9) Mathematics.
10) Languages.
11) Social Studies.

Another study[1] related to the present subject is by Lal Chand Kaul. The techniques used by the investigator to collect the data are the questionnaire and interview. The purpose of this study was to analyse the mode of inspection of the Corporation Middle Schools. In this study, the views and suggestions expressed by the members of inspectorate are interesting. They are:

1) Administrative and other routine workload of inspectors is so large and unavoidable in the present set up that it is not possible for the members of the inspectorate to do adequate justice to improving instructional work in the school through advice, guidance and supervision.

2) Pay scales of inspectors are not commensurate with their qualifications, and the nature and extent of work which they are required to do.

3) Inspectors are made to do every thing at the cost of academic work.

4) Some sort of training in the form of refresher course or seminar be given to inspectors before they are asked to act as supervisors.

5) Until and unless an inspector is allowed to spare more time for academic work in school he cannot do justice to his primary duty - education of the child.

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1. Lal Chand Kaul. An Investigation into Mode and Scope of Inspection of Delhi Municipal Corporation Schools and Suggestions for Its Improvement. Unpublished M.Ed. Dissertation, Central Institute of Education, 1966.

6) In the staff of the inspectorate there should be experts, two or three in each subject.

7) Inspectors should be provided with clerks and class IV servants.

8). Surprise inspections are more useful from the educational point of view than annual inspections.

9) Duties of inspectors are not clearly defined and are quite wide in range.

10) Number of inspectors and the average number of teachers within the jurisdiction of each member of inspectorate needs to be reduced considerably.

11) Expansion of elementary and secondary schools demand the corresponding increase in the strength of the inspectorate.

12) School inspectors should be entrusted with powers to set right the erring teachers.

C H A P T E R - III

THE PROCEDURE AND THE METHODS

The Sample

As already stated in Chapter I, the investigator selected two districts of Gulburga Division in Mysore State viz. Bellary and Gulburga for studying the attitude of secondary school teachers towards the new system of inspection by subject inspectors. The teachers teaching the high school classes in the high/higher secondary schools of these two districts constituted a sample size for the purpose of this study. The investigator deliberately selected these two districts for the following reasons:

1) He belongs to the Bellari district and has served as a teacher in the high schools of that district for several years. Hence he hoped to receive the maximum cooperation in his study from the teachers of that district.

2) The Gulburga district was chosen with the intention of increasing the sample size and to compare the findings between the two districts.

There are 59 high schools and 4 higher secondary schools in Bellary district, of which 13 high schools are newly established, whereas in Gulburga district there are 70 high schools and 10 higher secondary schools. By and large, the schools in the Bellary district are smaller in size as compared to the schools in the Gulburga district. The size here means the enrolment of students. Care was taken to see that the schools were selected from all the three types of agencies viz. 1) Government, 2) Local bodies, and 3) Private managements. Both

Boys and Girls schools were also included. At least one school from each taluka of the district was selected in order to provide due representation to all taluks. In all 50 high/higher secondary schools were chosen - 30 from Bellary district and 20 from Gulburga district. The Multipurpose high schools and teacher training institutes for primary schools, though they come under the purview of panel system of inspection by subject inspectors, were excluded from the present sample.

Construction of Attitude Scale (Likert Type)

"Attitudes are predispositions to react negatively or positively in some degree toward an object, institution or class of person."[1] The attitudes of an individual whether favourable or unfavourable towards a particular object can be ascertained by employing any one of the following techniques:

1) Asking the individual directly how he feels about a subject through the use of schedule, questionnaire or interview.

2) Asking the individual to check the statements in a list with which he is in agreement.

3) Asking the individual to indicate the degree of his agreement or disagreement with a series of statements about a controversial subject.

4) Inferring an individual's attitude from his reactions to projective devices through which he may reveal his attitude unconsciously.

In other words, attitudes of an individual whether favour-

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1. Mummally Jr. Jum C. Tests and Measurements, McGraw-Hill Book Company Inc., New York, 1961. p. 309.

able or unfavourable towards a particular object can be inferred either by observing directly his behaviour or by studying his reactions to the same. The latter method has led to the development of 'attitude scales' which "are designed to provide a quantitative measure of individual's relative position along a unidimensional attitude continuum."[1] Generally, the two popular methods widely used to measure the attitude, are the Thurstone's technique of scaled values and the Likert's method of summated ratings. The latter method was employed in the present study by the investigator. As such a 5-point scale of Likert type was constructed and administered on the selected sample of teachers to find out their attitude towards the new system of inspection by subject inspectors.

Collection and Editing of Statements

As a first step in developing an attitude scale, statements concerning the various aspects of the existing system of inspection namely, the concept and meaning of inspection[1], the functional basis of inspection[2], the supervisory role of inspectors[3], personality and scholarship of inspectors[4] and the relationship between the inspectors and teachers[5], were collected. The functional basis of inspection was further divided into three parts viz. functions of inspectors before inspection, during inspection and after inspection. This was done to obtain a clear picture of functional basis. As many as 137 statements were collected as under:

1) By surveying the available literature on the subject i.e. books, journals, periodicals, magazines, theses, etc.

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1. Anastasi Anne. Psychological Testing. The Macmillan Company, New York, 1961. P. 547.

2) By discussing with the experienced teachers and inspectors of schools.

3) By his own experience as a teacher.

Again, all the statements were categorised into the above mentioned various aspects of inspection to ensure that no aspect was left untouched. Statements that were ambiguous, factual and two-dimensional were eliminated. Ultimately, 56 statements were selected for the try-out, keeping in view the following criteria[1]

1) Avoid statements that refer to the past rather than to the present.

2) Avoid statements that are factual or capable of being interpreted as factual.

3) Avoid statements that may be interpreted in more than one way.

4) Avoid statements that are irrelevant to the psychological object under consideration.

5) Keep the language of the statements simple, clear and direct.

6) Statements should be short.

7) Each statement should contain only one complete thought.

8) Select statements that are believed to cover the entire range of the effective scale of interest.

9) Avoid the use of double negative.

10) Avoid the use of words that may not be understood by those who are to be given the completed scale.

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1. Edwards, Allen L. Techniques of Attitude Scale Construction. Appleton-Century-Crofts Inc., New York, 1957. p. 19.

Furthermore, five experienced members of the Associate-ship Course were requested to separate those 56 statements into two categories viz. positive statements and negative statements. On the basis of their expert opinion it was found that 36 statements were positive and 20 were negative. The list of 56 statements is given in Appendix II.

Weightage Given to the Statements

In the Likert's scaling technique, each item is rated on a five-point continuum ranging from 'strongly agree' to 'strongly disagree'. Generally the response is expressed in terms of the following categories: strongly agree, agree, undecided (cannot say), disagree and strongly disagree. In other words, the actual Likert scaling technique provides a 5-point scale value. Accordingly, the weightage assigned to each positive and negative statement is as follows.

	Weightage for Positive Statement	Weightage for Negative Statement
Strongly agree	5	1
Agree	4	2
Cannot say	3	3
Disagree	2	4
Strongly disagree	1	5

The total score obtained on all the items measures a respondent's favourableness or otherwise towards the subject in question.

Try-out

An attitude scale of Likert type containing 56 statements was finalised for try-out. The try-out was conducted on the

secondary school teachers of four higher secondary schools of Delhi, as the systems of inspection in both Delhi and Mysore States are similar in principle and practice. In both the States the panel system of inspection is prevalent. The following schools were selected for the purpose of try-out.

1) Sardar Patel Vidyalaya, Road No.3, Lodi Estate, New Delhi-3.

2) Madrasi Higher Secondary School, Lodi Road, New Delhi-3.

3) Shyama Prasad Vidyalaya, Lodi Estate, New Delhi-3.

4) Delhi Kannada Higher Secondary School, Lodi Estate, New Delhi-3.

The investigator went round all these schools and personally distributed the questionnaires with the help of the Principals of the respective schools. About 60 copies of the questionnaire were distributed with necessary instructions and illustrations for filling up the attitude scale but the investigator could hardly get 28 copies of them duly filled in by the teachers. Therefore, analysis for selecting the items was done with a small sample of 28.

For each item the frequencies under each category of the continuum viz. strongly agree, agree, cannot say, disagree and strongly disagree, were recorded. The comparatively high frequency under the column "cannot say" would indicate that the large number of respondents could not express their opinion either positively or negatively.

Example:

38

Item 11

	Strongly agree	Agree	Cannot say	Disagree	Strongly disagree
Frequencies	2	2	14	9	2

By observing the frequencies for the item 38, it is clear that 90% of the respondents were unable to express their opinion either favourably or unfavourably. This leads to an assumption that this item does not possess any discriminatory value to distinguish between the two groups. Hence it can be concluded that statement No.38 is a poor item. Such items with high frequency under column "cannot say" were eliminated.

In some cases it was found that almost all respondents had shown either favourable or unfavourable attitude. This is borne out from the example given below:

Example:

Item 46

	Strongly agree	Agree	Cannot say	Disagree	Strongly disagree
Frequencies	5	14	4	2	0

It is evident from the above frequency distribution that 78.57 per cent of the responses are favourable and only 9.09 per cent of the responses are unfavourable to item No.46. From this it can be concluded that this statement is more factual in nature than controversial. Such statements are not helpful in measuring the attitudes of individuals and were, therefore, discarded.

For 45 items, the frequencies were found to be fairly distributed on either sides (favourable and unfavourable) of the continuum. Ultimately, these 45 statements (23 positive and 22 negative) were included in the final attitude scale.

The language of some statements was modified without changing their original meaning. A list of 45 statements is given in Appendix III.

Administration and Collection of Data

Thus an attitude scale containing 45 statements, was finally administered on the secondary school teachers of Bellary and Gulburga districts. In case of Bellary district, the questionnaires were mailed to the headmasters/headmistresses of the selected high/higher secondary schools, requesting them to distribute the questionnaires to the concerned teachers of their schools and to collect them duly filled in from those teachers. Necessary instructions and illustrations for filling up the attitude scale were given in the covering letter as well as in the questionnaire itself. Self-addressed stamped envelopes were also enclosed along with the questionnaires so as to enable the heads of the institutions to return the completed ones in time. The number of questionnaires sent to each school ranged from 5 to 15 depending upon the probable strength of the teachers in each school.

Regarding Gulburga district, instead of sending the questionnaires by post to the various headmasters and headmistresses, the investigator sent them to one of his friends. He was requested to distribute them and collect the completed ones from the concerned teachers through the heads of their institutions. This method was found to be more effective than the former one.

In all, 320 questionnaires were sent of which 214 were returned duly filled in by the teachers as per instructions. The percentage of responses received thus works out to be 66.87%.

Selection of Items for Final Analysis and Interpretation

It was found necessary to select the statements that

would stand statistically significant. In order to do so χ^2-test[1] was employed by the investigator.

Out of 214 questionnaires received, a sample of 72 responses was randomly chosen for this purpose. Each statement was scored according to the weightage suggested in the earlier part of this Chapter. The total score of all the 45 statements gives the individual total score of a respondent. Accordingly, scoring was done for all the 72 individuals. Since the scale contains 45 items the total score 135 (45x3) shows neither positive nor negative attitude. The score above 135 indicates the favourable attitude whereas the score below 135 indicates unfavourable attitude.

On the basis of the individual scores, the 72 individuals were grouped into two categories viz. favourable and unfavourable groups. Favourable group means the group of individuals showing favourable attitude and vice-versa. 29 individuals belonged to the favourable group and 43 individuals to unfavourable group. The frequencies for a particular statement under each category of the scale were recorded against each group in a tabular form. These are known as observed frequencies (f_o). To find the χ^2 in addition to the observed frequencies, expected frequencies (f_e) are also required. Hence the expected frequencies (f_e) were calculated with the help of the total frequencies under each category as well as against each group. The method of calculating the expected frequency is explained in the following illustration. The difference between the observed and expected

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1. Garrett, Henry E., Statistics in Psychology and Education, Allied Pacific Private Limited, Bombay, 1966, p. 234.

frequencies is to be squared and divided by the expected frequency in each cell and the sum of the quotients would be χ^2

i.e. $\chi^2 = \sum(f_o - f_e)^2/f_e$.[1]

Example:

Item 3

		Strongly agree		Agree		Disagree	Total
Favourable	f_o	3	3	9	9	5	29
	f_e	5.6	6.8	6.4	7.2	2.8	
Unfavourable	f_o	11	14	7	9	2	43
	f_e	8.4	10.2	9.6	10.8	4.2	
Total		14	17	16	18	7	72

Where f_o = observed frequency.

f_e = expected frequency.
The expected frequency can be calculated in the following manner:

If the expected frequency of unfavourable group under 'strongly agree' category is required to be calculated, the product of the total frequencies of 'strongly agree' and those of 'unfavourable' has to be divided by the total number of cases i.e.

$$\frac{14 \times 43}{72} = 8.4$$

Similarly the expected frequency for each cell can be calculated. Hence after substituting the experimental values in the formula

$$\chi^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

$$\chi^2 = 12.23$$

df = 4 P = .02
(Level of significance)

1. Garrett, Henry E. op. cit. p. 254.

In the same way the χ^2 was worked out for each of the 45 statements. The following Table 1 shows the value of χ^2 and the level of significance for each statement.

Table 1

χ^2-Value for each Statement

S.No. of the statement	χ^2-Value	Level of Significance
1.	14.00	.01
2.	6.80	-
3.	12.23	.02
4.	15.18	.01
5.	13.48	.01
6.	3.44	-
7.	14.58	.01
8.	25.14	.01
9.	17.17	.01
10.	6.16	-
11.	10.68	.05
12.	18.30	.01
13.	9.67	.05
14.	15.37	.01
15.	9.66	.05
16.	14.30	.01
17.	3.73	-
18.	17.60	.01
19.	4.12	-
20.	4.26	-
21.	11.14	.05
22.	7.98	-

S.No. of the Statement	X^2-Value	Level of Significance
23.	5.21	-
24.	7.12	-
25.	23.69	.01
26.	5.01	-
27.	10.39	.05
28.	9.55	.05
29.	11.89	.02
30.	11.90	.02
31.	13.49	.01
32.	18.40	.01
33.	9.49	.05
34.	6.99	-
35.	1.28	-
36.	25.90	.01
37.	11.00	.05
38.	12.00	.02
39.	13.87	.01
40.	13.10	.02
41.	25.67	.01
42.	5.73	-
43.	6.72	-
44.	6.71	-
45.	17.30	.01

It can be seen from the above table that only 30 items are statistically significant. The list of actual statements is given in Appendix IV.

Only those 30 items that were found to be statistically significant were taken into consideration for the final analysis and interpretation. The 30 statements cover all aspects of inspection. Of these 30 statements 20 are positive and 10 are negative. In case of the rest of the respondents scoring was done only for these 30 statements.

Reliability of the Attitude Scale

The Reliability concerns the precision of measurement regardless of what is measured. The split-half method was employed to estimate the reliability of the attitude scale. The total score for each item of all the individuals was worked out. Further, all the 30 items selected by means of χ^2-test were given fresh serial numbers for the convenience of grouping them into even-numbered and odd-numbered items so that the entire scale would be divided into two equal halves. The correlation coefficient for scores of even-numbered items and scores of odd-numbered items was calculated. This gives the reliability coefficient for half the test. The Spearman-Brown prophecy formula[1] was used for estimating the reliability coefficient for the entire scale.

$$r_{11} = \frac{2r_{\frac{1}{2}\frac{1}{11}}}{1+r_{\frac{1}{2}\frac{1}{11}}}$$ (Spearman-Brown prophecy formula)

Where r_{11} = Reliability coefficient of the whole test.

$r_{\frac{1}{2}\frac{1}{11}}$ = Reliability coefficient of the half test found experimentally.

In the case of the present attitude scale the reliability coefficient for half-test ($r_{\frac{1}{2}\frac{1}{11}}$) was found to be 0.89. Hence

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1. Garrett, Henry E. op. cit. p.359.

by substituting this value in the Spearman-Brown formula the reliability for the entire scale was found to be 0.94

$$\text{i.e. } r_{11} = \frac{2 \times .89}{1 + .89} = 0.94.$$

Validity of the Attitude Scale

"Attitude tests have been severely criticized because they have been used without their validity having been established. The failure to demonstrate that they are valid measures of belief is in part due to the difficulty of finding criteria."[1]

In view of the difficulties of measuring the validity of attitude scale, opinions expressed by the testees regarding inspection were taken as valid opinions.

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1. Cronbach, Lee J. Essentials of Psychological Testing. Harper Brothers, New York, 1949. P. 375.

C H A P T E R - IV

ANALYSIS AND INTERPRETATION OF DATA

Sample Chosen for Analysis

Of all 320 questionnaires sent, 214 were received duly filled in by the secondary school teachers of Bellary and Gulburga districts. On a careful scrutiny of the responses it was found that 27 were incomplete in spite of the clear instruction that no statement should be left unchecked. 17 responses were from those teachers who had hardly put in one year or less than one year of service in the teaching profession. Responses from such teachers were not analysed assuming that they might not have faced the inspection even once. The above mentioned two types of responses having been thus excluded, the remaining 170 were retained for the purpose of analysis.

Out of 170 respondents 99 belonged to Bellary district and 71 to Gulburga district. A list of high/higher secondary schools ~~kxxpkxxx~~ from which the teachers' responses were received is given in Appendix V.

Scoring Procedure

Scoring was done in respect of 170 respondents for 30 items of which 14 pertained to inspection and 16 to inspector. The individual total scores for 30 items were, however, taken into account together in order to find out the attitude of teachers towards inspection on the whole. Since there are 30 items in the present attitude scale, the total individual score of 90 (according to the weightage suggested in Chapter III) would indicate a neutral attitude. This in other words means that the

score 90 is a neutral point, and the score above this point would show the positive attitude and below this point the negative attitude.

Analysis of Data

1. Attitude of Teachers towards Inspection on the whole

Table 2.0

Frequency distribution of teachers regarding inspection on the whole

Scores Class Interval (C.I.)	No. of teachers Frequency (f)
46-50	2
51-55	1
56-60	1
61-65	5
66-70	8
71-75	13
76-80	15
81-85	23
86-90	15
91-95	21
96-100	29
101-105	20
106-110	11
111-115	2
116-120	2
121-125	0
126-130	2
Total	170

Mean Score = 89.25

Standard Deviation (S.D.) = 14.30

It is evident that the difference between the Mean Score 89.25 and the neutral point is almost negligible. It can,

refore, be inferred that the teachers' attitude towards spection on the whole is neither favourable nor unfavourable. ey neither welcome the inspection as a useful advisory ser- ce nor hate it as an unnecessary imposition. In other words, e system of inspection by a panel of subject specialists though it is meant for improving the academic supervision has t significantly changed the attitude of teachers towards spection.

It was further ascertained whether there is any significant difference in the attitude of teachers toward inspection nd inspector if they are considered separately. For this pur- ose, the entire attitude scale was divided arbitrarily into two parts viz. part I - statements pertaining to inspection and its process and part II - statements concerned with inspectors, their scholarship, behaviour, etc. Out of 30 statements 14 belonged to the former part and 16 to the latter.

The total scores for 14 items (part I) and 16 items (part II) were taken into consideration separately. The Mean score of all the 14 items in part I in respect of 170 individuals indicates the attitude towards inspection. Similarly, the Mean score of 16 items in part II indicates the attitude towards inspector. The Means of both the parts were computed. The frequency distribution table for each part is given in Appendix VI. The figures regarding Mean and S.D. of scores obtained by teachers in respect of their attitude towards inspection and inspector are set out in the table below:

Table 2.1

[illegible]

Attitude towards	No. of Teachers	Means	S.D.s
Inspection	170	44.45	7.80
Inspectors	170	44.50	8.19

The above table shows that the Mean score (44.45) in respect of inspection is greater than the neutral point i.e. 42 whereas the Mean score (44.50) regarding the inspectors is less than the neutral point i.e. 42. These Mean scores indicate that teachers show favourable opinion towards inspection but not towards inspectors.

It was also necessary to find out whether the difference between these two means was statistically significant. Since these two means were correlated and the number of items in each part were not equal, the following formula was used to test the significance of difference:

$$t = \frac{\Sigma D}{\sqrt{\frac{N\Sigma D^2 - (\Sigma D)^2}{N-1}}} \quad \text{..... (Formula 7.11)}^1$$

Where D = Difference between two means

N = Number of individuals

Since the number of items was not equal in both parts, it was essential to find out the Mean item score for each part in

1. Walker & Lev. Statistical Inference, Oxford & IBH Publishing Co., 36, Chowringhee Road, Calcutta 16, 1965. p. 153.

respect of each individual. The Mean item score (M_1) of part I regarding inspection was obtained by dividing the total score of 14 items by 14. Similarly, the total score of part II was divided by 16 in order to get the Mean item score (M_2). Thus for each individual there were two means viz. Mean (M_1) for 'Inspection' and Mean (M_2) for 'Inspector'. The difference between two means was denoted by 'D'.

Example:

the individual	Score of 14 items for Part I	Score of 16 items for Part II	Score of Part I M_1	Score of Part II M_2	of means M_1-M_2 D
1	52	50	3.71	3.12	0.59

The difference ($D = M_1-M_2$) was worked out in respect of all the 170 individuals. The sum of all the differences (ΣD) was found to be equal to 61.19. This would have been equal to zero had it not been any difference between the two means. This data was substituted in the formula in order to test its significance.

Data:

$\Sigma D = 61.19.$ $\Sigma D^2 = 47.73.$ $N = 170$

$$t = \frac{\Sigma D}{\sqrt{\frac{N\Sigma D^2 - (\Sigma D)^2}{N-1}}}$$

Substituting the data in the formula:

$$t = \frac{61.19}{\sqrt{\frac{170 \times 47.73 - (61.19)^2}{170-1}}}$$

$$= 12.21^*$$

* Significant at .01 level

The t-value indicates that there is a significant difference between the two means. This shows that teachers have different attitudes towards inspection and inspectors. In other words, teachers have favourable opinion about inspection and its process but not about inspectors and their behaviour. They like inspection but they do not like inspectors.

In the subsequent analysis an attempt has been made to ascertain whether the attitude of teachers towards inspection differs with their sex, age, qualifications, experience and the subjects taught. Besides, the differences between the teachers' attitude towards inspection have also been studied district-wise (Bellary/Gulburga) and on the basis of management of schools.

2. Attitude of Teachers towards Inspection by Sex

The scores obtained by 148 male teachers and 22 female teachers were analysed. The frequency distributions of these two groups are given separately in Appendix VII. The means and S.D.s of the scores were calculated which are given below:

Table 1.2

Means and S.D.s of scores obtained by male and female teachers

Attitude towards inspection of	No. of Teachers	Means	S.D.s	t-value for the difference of Means
Male teachers	148	89.20	14.15	0.32*
Female teachers	22	90.05	11.15	

* Not significant at .01 level.

In order to test the significance of difference between the two means the following formula[1] was employed.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{S_1^2}{N_1} + \frac{S_2^2}{N_2}}}$$

Where $\bar{X}_1$ = Mean of the first group

$\bar{X}_2$ = Mean of the second group

S_1^2 = Variance of the first group

S_2^2 = Variance of the second group

N_1 = Sample size of the first group

N_2 = Sample size of the second group

By substituting the experimental values in the formula, we get,

$$t = \frac{90.05 - 81.20}{\sqrt{\frac{11.15^2}{22} + \frac{14.15^2}{148}}}$$

$$= \frac{8.85}{2.65} = 0.32^*$$

* not significant at .05 level.

Since the t-value is not significant, it indicates there is no difference between the attitudes of male and female teachers towards inspection.

3. Attitude of Teachers towards Inspection by Age

The average chronological age of teachers was found to be 36.30 years ranging from 22 years to 58 years. They were classified according to their ages into four groups viz. teachers below

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1. Walker & Lev. op. cit. p. 157.

30 years, between 31 and 40 years, between 41 and 50 years and above 50 years. The frequency distributions of teachers is given in Appendix VIII. Means and S.D.s were found for different age-groups, which are indicated in the following table:

Table 4.0

Mean and S.D.s of scores obtained by teachers of different age-groups

Attitude of teachers of different age-groups towards inspection	No. of Teachers	Mean	S.D.
Teachers below 30 years	71	91.30	13.50
Teachers between 31-40 years	70	87.15	13.05
Teachers between 41-50 years	17	87.10	12.10
Teachers above 50 years	12	91.00	15.00

It is interesting to note from the above table that the teachers below 30 years and above 50 years tend to show a positive attitude towards inspection whereas the teachers between 31 and 50 years show a negative attitude. But this difference is not statistically significant as found by the technique of Analysis of Variance.

Table 4.1

Summary-Analysis of Variance - age wise

Source of Variance	df	SS	Mean Square	F-ratio
Between the groups	3	684.05	228.02	1.11*
Within the groups	166	34162.90	205.73	
Total	169	34846.95		

* not significant at .05 level.

4. Attitude of Teachers toward Inspection by Qualifications

Here the analysis was done in the following two ways:

1) According to the professional qualifications of teachers; (trained/untrained teachers) and

2) According to the academic qualifications of teachers (post-graduates, science graduates and arts graduates).

Attitude of teachers according to their professional qualifications was ascertained by working out the Means and S.D.s of scores obtained by teachers (trained/untrained). The relevant figures in this regard are given below. The raw scores are given in Appendix IX A.

Table 5.2

Means and S.D.s of scores obtained by trained and untrained teachers

Attitude of	No. of Teachers	Means	S.D.s	t-value
Trained teachers	116	88.06	14.40	1.32*
Untrained teachers	52	91.25	14.45	

* not significant at .05 level.

It would appear that the untrained teachers show more favourable attitude towards inspection than the trained teachers. The t-value is, however, not significant and it does not, therefore, support this inference.

Attitude of teachers according to their academic qualifications was found out by calculating the Means and the S.D.s of scores obtained by post-graduates, science graduates and arts graduates. Both science and arts post-graduates were included in one group so as to obtain adequate sample size. Means and

S.D.s of scores obtained by these categories of teachers are indicated below. The raw scores are given in Appendix IX B.

Table 5.1

Mean and S.D.s of scores obtained by post-graduate, graduate and non-graduate teachers

Attitude	No. of Teachers	Mean	S.D.
Post-graduates (Arts & Science)	24	86.75	8.30
Science graduates	64	88.36	13.90
Arts graduates	82	90.62	15.45

The means indicate that the attitude of arts graduates is more favourable than that of the other two groups. The technique of analysis of variance was applied to ascertain whether there was any significant difference in the above relationship. (For this see table 5.2 below).

Table 5.2

Summary-analysis of variance - qualification wise

Source of Variance	d.f.	Sum of Squares	Mean Square	F-Ratio
Between the groups	2	267.95	133.97	0.65*
Within the groups	167	34579.00	207.06	
Total	169	34846.95		

*Not significant at .05 level.

The F-Ratio confirms that there is no significant difference in the attitudes of teachers towards inspection according to their qualifications.

5. Attitude of Teachers towards Inspection by Experience

The average teaching experience of teachers was 9.95

years ranging from 2 to 30 years. For classifying the teachers into various groups on the basis of their teaching experience a class interval of 5 years was taken into consideration as it was thought that 5 years would be a sufficient span of time to form their opinions, favourable or otherwise, regarding the system of inspection. The Means and S.D.s of scores were worked out, which are given below. The raw scores are given in Appendix X.

Table 6.0

Means and S.Ds of scores obtained by teachers with experience

Teachers with experience	No. of Teachers	Mean	S.D.s
Below 5 years	63	90.40	15.15
Between 6-10 years	36	90.80	9.85
Between 11-15 years	33	87.55	16.35
Between 16-20 years	25	80.20	13.15
Above 20 years	15	88.33	13.80

The figures in the above table show that there is no appreciable difference between the means of various groups of teachers according to their experience. This indicates that attitude of teachers towards inspection is independent of their teaching experience. This is also confirmed statistically by the analysis of variance as can be seen from the following table:

Table 6.1

Summary-Analysis of variance - one-lone way

Sources of Variance	df	SS	Mean Square	F-Ratio
Between the groups	4	1632.05	408.01	2.02*
Within the groups	165	33214.90	201.29	
Total	169	34846.95		

* not significant at .05 level.

6. Attitude of Teachers towards Inspection by Subjects Taught

In order to study the effect of this variable on the attitude of teachers towards inspection, teachers were classified into three broad categories viz. teachers teaching science subjects (science teachers), teachers teaching humanities (humanities teachers) and teachers teaching only languages language teachers). From the responses received it was noticed that in most cases teaching of English as a subject for one class or the other appeared to be compulsory on the part of all teachers in addition to their specialised subjects. But for the purpose of classifying them, the teaching of specialised subjects was only taken into consideration.

Means and S.D.s of scores obtained by the three groups of teachers were calculated, which are indicated below. The raw scores are given in Appendix XI.

Table 7.0

Mean and S.D. of scores obtained by different subject teachers

Attitude of	No. of Teachers	Mean	S.D.
Science teachers	73	89.65	13.45
Humanities Teachers	52	86.85	16.50
Language Teachers	45	91.00	12.00

From the means it appears that the language teachers hold a favourable opinion about the inspection system while the science and humanities teachers do'nt. In order to test the significance of difference between the above mentioned groups, the technique of 'Analysis of Variance' was employed. The results are summarised below:

Table 7.1

Summary-Analysis of Variance - subject wise

Variation	df	SS	Mean Square	F-Ratio
Between the groups	2	484.67	242.34	1.18*
Within the groups	167	34362.28	205.76	
Total	169	34846.95		

* not significant at .05 level.

It will be seen that the F-Ratio is not significant. This means that there is practically no difference in the attitudes of different subject-teachers towards inspection.

7. Attitude of Teachers towards Inspection - District Wise

First, the teachers were classified into two groups viz. teachers belonging to Bellary district and teachers belonging to Gulburga district. This was followed by calculating the Means and S.D.s of scores obtained by each group. The figures are presented in the table below. The raw scores are given in Appendix XII.

Table 8.0

Means and S.D.s of scores obtained by Bellary and Gulbarga District Teachers

Attitude of teachers from	No. of Teachers	Means	S.D.s	t-value for the difference of Means
Bellary District	99	88.95	15.05	0.46*
Gulburga District	71	89.30	11.95	

* not significant at .05 level.

It is evident from the above table that the difference between the means is negligible. This indicates that there is no difference in the attitudes of teachers of Bellary and Gulburga districts towards inspection. The t-value which is not significant at .05 level also confirms this inference.

8. Attitude of Teachers towards Inspection by Management of Schools

The scores obtained by teachers were classified according to the management of schools under which they were working viz. teachers working in Government schools, teachers working in schools run by Local bodies and teachers working in privately managed schools. The means and S.D.s were computed which are indicated below. The raw scores are given in Appendix XIII.

Table 3.2

Mean and S.D. of scores obtained by teachers working in schools managed by different agencies

Attitude of Teachers working in	No. of Teachers	Means	S.D.s
Government schools	54	90.04	12.75
Local Bodies schools	50	84.80	15.15
Private schools	66	91.10	14.30

It is evident from the above figures that teachers working in local bodies schools show unfavourable attitude while teachers from Government and private schools show favourable attitude towards inspection. The following table summarises the results of analysis of variance which was used to test the significance of difference between means.

Table 3.3

Summary-Analysis of Variance - Management wise

Sources of Variance	df	SS	Mean Square	F-ratio
Between the groups	2	919.45	459.72	2.21*
Within the groups	167	33927.50	203.16	
Total	169	34846.95		

* not significant at .05 level.

The F-ratio shows that there is no significant differences in the attitudes of teachers working in schools managed by different agencies, towards the new system of inspection by subject specialists.

MAIN FINDINGS OF THE STUDY

1) The attitude of teachers towards the new system of school inspection by a panel of subject inspectors is, on the whole, neither favourable nor unfavourable.

2) The teachers' attitude towards the new system of school inspection does not differ with their sex, age, qualifications, experience and the subjects taught.

3) The attitude of teachers towards inspection by subject specialists and its process is favourable whereas their attitude towards inspectors as individuals is not favourable.

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APPENDIX I

List of Theses on Indian Education (M.Ed.)

S.No.	University	Name	Title
1.	Agra	Tewari V.K.	Supervision of Basic Schools in Bhopal (M.P.) 1959.
2.	Agra	Santa Prakash	A study of Inspection Procedure in the Middle Schools of Sirmaur District (H.P.) 1960
3.	Allahabad	Mohan M.	Inspection of Secondary Schools in U.P. 1954
4.	Baroda	Padhya L.M.	A study of the Duties and Responsibilities of the District Educational Inspector in Bombay State Today 1956
5.	Baroda	Shah K.M.	Office Records of an Educational Inspector 1957
6.	Delhi	Parimoo K.	The Attitude of Teachers towards Inspection 1951
7.	Delhi	Bhatnagar O.	An Investigation into the Supervisory Services of Secondary Education in Delhi State 1955
8.	Jabalpur	Shukla K.L.	Survey of Inspection of Basic Primary Schools 1961
9.	Kerala	Thankamma M. A.	A study of the Organisation and Methods of Supervision and Inspection of Schools in Kerala 1958
10.	Lucknow	Misari P.L.	Educational Supervision - the Relation Between the Superintendents and the Teachers Conception of the Same 1956
11.	Mysore	Mungendrappa D.R.	Educational Supervision in Enlarged Mysore 1959
12.	Madras	Naresh G.S.	The Case of Reorganising the Inspectorate for Primary Education into the Madras Presidency 1947

S.No.	University	Name	Title
13.	Madras	Balagopal	A study of the Reorganisation of the Work of the Inspectorate of Education: Schools in North Arcot District Since 1920. 1956
14.	Osmania	Daraf M.A.A.	Inspection of Primary School (India) 1947
15.	Patna	Bhella D. Singh	An Investigation into the Problems of Supervision of Primary School in Bihar 1959
16.	Patna	Chatterji A.	The Problems of Inspection and Supervision of Secondary Schools in Bihar 1961
17.	Rajasthan	Sharma B.M.	An Investigation into the Attitude of Teachers serving in Multipurpose School of Rajasthan towards School Supervision 1960
18.	Rajasthan	Ghoni G.M.	An Investigation into the Attitude of Secondary School Teachers towards Prevailing Practices of Inspection in Rajasthan 1960
19.	Saugar	Chaurasia R.D.	Instructional Supervision Practices in Secondary Schools in Vindya Pradesh Region 1961
20.	Saugar	Tiwari T.P.	Inspection of Junior High Schools in Rewa District during Last Five Years 1955 to 1960-1961
21.	Utkal	Patnaik L.	Supervision of High Schools in Orissa 1958
22.	Utkal	Nayak H.C.	A Survey of the Nature and Extent of Supervision of High Schools in the Central School Circle of Orissa 1960
23.	Vikram	Vyas B.N.	Comparative Study into the Working and Organisation of the Educational Inspectorate in Madhya Pradesh With Special Reference to Bhopal and Madhya Pradesh

APPENDIX II

An Investigation into the Attitude of Secondary School Teachers towards Subject Wise School Inspection

ATTITUDE SCALE

1. Name of the School .....

2. Location of the School

   i) Place .....

   ii) Taluk/Tehsil .....

3. i) Name of the Teacher * .....

   (If you feel like not giving your name you need not, but other particulars are necessary.)

   ii) Sex .....

   iii) Age (in years) .....

   iv) Qualifications

      a) Academic .....

      b) Professional .....

   v) Experience in years

      a) Teaching .....

      b) Inspectorate .....

   vi) Subjects taught

      a) .....

      b) .....

      c) .....

      d) .....

The following are statements concerning the various aspects of school inspection by subject inspectors. You are requested to put tick mark (✓) against each statement in the column you think appropriate.

Example:

"Inspection by a panel of subject specialists is preferable to that by a single inspector"

National Institute of ...

If you think that the improvement of existing system of inspection exclusively depends upon changing the functional basis of inspection from a single inspector by a panel of subject specialists, you put tick mark (√) against the statement under column "strongly agree"; but if you think that improvement may be there because of this change but not to such an extent then put tick mark (√) against it under column "agree"; if you cannot decide either way you put tick mark (√) against it under column "Cannot say" and so on.

Please do not leave any statement unmarked.

S. No.	Statements	Strongly agree	Agree	Can-not say	Dis-agree	Strongly disagree
1	2	3	4	5	6	7
1.	Inspection helps the teachers improve their techniques of teaching.					
2.	Inspection helps the teachers become skilled in dealing with children.					
3.	Inspection hampers self-expression of the teachers.					
4.	Inspection takes place in cheerful, congenial and cordial atmosphere.					
5.	Inspection by a panel of subject-specialists is preferable to that by a single inspector.					
6.	Inspection should take place at least once in a year.					
7.	Apart from normal inspection, the inspectors are ready to visit a school at the instance of staff, as advisers and consultants.					
8.	Inspectors feel uneasy to sit in the class for the entire period and observe the whole lesson.					
9.	Follow-up work is done by inspectors.					

10. Inspection helps in ascertaining the proper utilisation of physical facilities provided in the school.

11. The purpose of inspection is only to improve teaching and learning process.

12. The purpose of inspection is only to rate teachers.

13. Inspectors are guided by the replies of the students, while judging the teachers' work.

14. Inspection takes place in an artificial atmosphere.

15. Inspectors form their opinion about the teachers on the basis of observing a single lesson.

16. Inspection lays much emphasis on teachers' diaries (notes of lessons).

17. Inspectors do not take into consideration the teachers' personal difficulties while judging their work.

18. Inspectors do not give individual guidance and suggestions to teachers.

19. Inspection helps in disseminating to teachers research findings of successful experimentation.

20. Inspection enables the teachers and headmasters to analyse academic problems and solve them through action research (class-room research).

0	1	2	3	4	5	6

21. The visit of inspector is a source of inspiration to the teachers.

22. Inspection facilitates the communication of good practices of one school to another.

23. Inspectors do nothing else than criticise the methods of teaching employed by teachers.

24. Inspectors diagnose and remedy the class-room situations effectively.

25. Inspection helps teachers to be self-reliant.

26. Remarks by inspectors regarding ineffective teaching are made keeping in view the physical facilities available in school for teaching different subjects.

27. Inspectors should keep case histories of teachers.

28. Criticism and suggestions by inspectors are related to the basic principles of teaching and learning.

29. Before a teacher's work is rated unsatisfactory, inspectors should discuss with the headmaster who is conversant with teacher's problems and shortcomings.

30. Inspectors try to avoid meetings with teachers after class-room visitation.

31. Inspectors commend whatever is good and deserves commendation to boost the morale of teachers.

32. Free and impersonal talks take place in the meetings between inspectors and teachers.

33. Worthwhile ideas are exchanged in the meetings between inspectors and teachers.

34. Suggestions made by the inspectors are rarely practicable.

35. Inspectors recommend library books, supplies and equipment needed for teaching and learning.

36. Inspection-reports are promptly sent to the teachers by inspectors.

37. Inspectors respect the individuality of teachers.

38. Inspectors have ability to evaluate teachers' competence objectively.

39. Inspectors insist upon using their own methods of teaching (which inspectors themselves prefer and advocate) by all teachers.

40. Some teachers can present lessons better than inspectors.

41. Inspectors are liberal in their out-look.

42. Inspectors are careful about teachers' prestige in the class.

43. Inspection does not provide any guidance to teachers in preparing and using appropriate type of instructional materials and in other educational matters.

0	1	2	3	4	5

44. Frequent visits of inspectors disconcerts the regular school work.

45. Teachers become nervous at the time of inspectors' visit and their teaching is thereby affected.

46. Inspection of co-curricular activities is neglected.

47. [illegible] assist teachers in [illegible] resource persons useful in the environment and improvement of school programmes.

48. Inspectors try to protect and support teachers against unjust comments by school authorities.

49. Inspectors interfere frequently during the course of lesson.

50. The number of subject inspectors is inadequate to cope with work.

51. Inspectors set an example to teachers by engaging themselves in class-room research.

52. Inspectors hesitate to give demonstration lessons for the guidance of teachers.

53. Inspectors make teachers sensitive to the problems through presenting facts and raising questions.

54. Inspectors give guidance to teachers in constructing evaluation tests.

55. Inspection reports contain more of factual data rather than suggestions and measures to improve teaching-learning process.

0 1 2 3 4 5 6

56. Inspection by subject inspectors makes teachers feel that they (inspectors) themselves belong to the teaching community.

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APPENDIX III

List of 41 statements selected for final administration

1. Inspection helps the teachers improve their technique of teaching.

2. Inspection helps the teachers become skilled in dealing with children.

3. Inspection hampers self-expression of the teachers.

4. Inspection takes place in cheerful, congenial and cordial atmosphere.

5. Inspection by a panel of subject-specialists is preferable to that by a single inspector.

6. Inspection should take place at least once in a year.

7. Inspection helps in assessing the proper utilisation of physical facilities provided in the school.

8. The purpose of inspection is to improve teaching and learning process.

9. Inspection lays much emphasis on teachers' diaries (notes of lessons).

10. The purpose of inspection is not to give individual guidance and suggestions to teachers.

11. Inspection helps in disseminating to teachers research findings of successful experimentation.

12. Inspection enables the teachers and headmasters to analyse academic problems and solve them through action research (class-room research).

13. Inspection facilitates the communication of good practices of one school to another.

14. Inspection helps teachers to be self-reliant.

15. Inspection-reports are promptly sent to the teachers by inspectors.

16. Inspection does not provide any guidance to teachers in preparing and using appropriate type of instructional materials and in other educational matters.

17. Inspection reports contain more of factual data rather than suggestions and measures to improve teaching-learning process.

18. Inspection by subject inspectors makes teachers feel that they (inspectors) themselves belong to the teaching community.

19. Follow-up work should be done by inspectors.

20. Inspectors are guided by the replies of the students, while judging teachers' work.

21. Inspectors form their opinion about the teachers on the basis of observing a single lesson.

22. Inspectors do not take into consideration the teachers' personal difficulties while judging their work.

23. The visit of inspector is a source of inspiration to the teachers.

24. Inspectors do nothing else than criticise the methods of teaching employed by teachers.

25. Inspectors diagnose and remedy the class-room situations effectively.

26. Remarks by inspectors regarding ineffective teaching are made keeping in view the physical facilities available in school for teaching different subjects.

27. Criticism and suggestions by inspectors are related to the basic principles of teaching and learning.

28. Before a teacher's work is rated unsatisfactory, inspectors seldom discuss with the headmaster who is conversant with teacher's problems and shortcomings.

29. Inspectors try to avoid meetings with teachers after class-room visitation.

30. Inspectors commend whatever deserves commendation to boost the morale of teachers.

31. Free and impersonal talks take place in the meetings between inspectors and teachers.

32. Worthwhile ideas are exchanged in the meetings between inspectors and teachers.

33. Suggestions made by the inspectors are rarely practicable.

34. Inspectors insist upon using their own methods of teaching (which inspectors themselves prefer and advocate) by all teachers.

35. Some teachers can present lessons better than inspectors.

36. Inspectors are careful about teachers' prestige in the class.

37. Frequent visits of inspectors dislocate the regular school work.

38. Teachers become nervous at the time of inspectors' visit and their teaching is thereby affected.

39. Inspectors assist teachers in securing resource persons useful in the enrichment and improvement of school programmes.

40. Inspectors try to protect and support teachers against unjust comments by school authorities.

41. Inspectors interfere frequently during the course of lesson.

42. The number of subject inspectors is inadequate to cope with work.

43. Inspectors hesitate to give demonstration lessons for the guidance of teachers.

44. Inspectors make teachers sensitive to the problems through presenting facts and raising questions.

45. Inspectors give guidance to teachers in constructing evaluation tests.

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APPENDIX IV

List of 30 statements selected for analysis and interpretation

1. Inspection helps the teachers improve their technique of teaching.

2. Inspection hampers self-expression of the teachers.

3. Inspection takes place in cheerful, congenial and cordial atmosphere.

4. Inspection by a panel of subject-specialists is preferable to that by a single inspector.

5. Inspection helps in assessing the proper utilisation of physical facilities provided in the school.

6. The purpose of inspection is to improve teaching and learning process.

7. Inspection lays much emphasis on teachers' diaries (notes of lessons).

8. Inspection helps in disseminating to teachers resources finding of successful experimentation.

9. Inspection enables the teachers and headmasters to analyse academic problems and solve them through action research (class-room research).

10. Inspection facilitates the communication of good practices of one school to another.

11. Inspection helps teachers to be self-reliant.

12. Inspection reports are promptly sent to the teachers by inspectors.

13. Inspection does not provide any guidance to teachers in preparing and using appropriate type of instructional materials and in other educational matters.

14. Inspection by subject inspectors makes teachers feel that they (inspectors) themselves belong to the teaching community.

15. Inspectors form their opinion about the teachers on the basis of observing a single lesson.

16. Inspectors diagnose and remedy the class-room situations effectively.

17. Criticism and suggestions by inspectors are related to the basic principles of teaching and learning.

18. Before a teacher's work is rated unsatisfactory, inspectors seldom discuss with the headmaster who is conversant with teacher's problems and shortcomings.

19. Inspectors try to avoid meetings with teachers after classroom visitation.

20. Inspectors comment whatever deserves commendation to boost the morale of teachers.

21. Free and impersonal talks take place in the meetings between inspectors and teachers.

22. Worthwhile ideas are exchanged in the meetings between inspectors and teachers.

23. Suggestions made by the inspectors are rarely practicable.

24. Inspectors are careful about teachers' prestige in the class.

25. Frequent visits of inspectors dislocate the regular school work.

26. Teachers become nervous at the time of inspectors' visit and their teaching is thereby affected.

27. Inspectors assist teachers in securing resource persons useful in the enrichment and improvement of school programmes.

28. Inspectors try to protect and support teachers against unjust comments by school authorities.

29. Inspectors interfere frequently during the course of lessons.

30. Inspectors give guidance to teachers in constructing evaluation tests.

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APPENDIX V

List of high/higher secondary schools from which the responses were received

1. St. John's High School, Bellary.
2. Government High School for Girls, Bellary.
3. Municipal Higher Secondary School, Bellary.
4. S.G. Higher Secondary School, Bellary.
5. M.B.M.L. High School, ~~Mirugappa~~ Bellary.
6. Board High School, Mirugappa.
7. Board High School, Teikalakota.
8. Board High School, Kottur.
9. Board High School, Kudligi.
10. S.B. High School, Kammasdagu.
11. Taluk Board Girls High School, Kottur.
12. Taluk Board High School, Gudekota.
13. S.V.S.D. High School, Holulu.
14. Govt. High School, Hagaribommanahalli.
15. V.V. Sangha High School, Hire Hadagalli.
16. Government Multipurpose High School, Harapanahalli.
17. Taluk Board High School, Siddigirisamla.
18. M.P. Taluk Board High School, Mariyammanahalli.
19. H.B. High School, Kudithini.
20. G.B.M.P. High School, Gulburga.
21. Mahadevi Girls High School, Gulburga.
22. Government M.P. High School, Gulburga.
23. Nutan Vidyalaya High School, Gulburga.

APPENDIX VI

Frequency distribution of teachers for 'Inspection' dimension

1. Frequency distribution regarding 'inspection'

Scores C.I.	No. of Teachers f.
25-30	8
31-35	16
36-40	28
41-45	36
46-50	41
51-55	32
56-60	7
61-65	2
Total	170

Mean = 44.45

S.D. = 7.80

2. Frequency distribution regarding 'inspection'

Scores C.I.	No. of Teachers f.
16-20	2
21-25	2
26-30	7
31-35	11
36-40	25
41-45	37
46-50	55
51-55	18
56-60	8
61-65	3
66-70	2
Total	170

Mean = 44.50

S.D. = 8.50

APPENDIX VII

Innovation distribution of teachers towards innovation - Maths

1. Male Teachers

Scores O.I.	No. of Teachers f.
46-50	2
51-55	1
56-60	1
61-65	5
66-70	7
71-75	11
76-80	14
81-85	18
86-90	12
91-95	19
96-100	26
101-105	16
106-110	10
111-115	2
116-120	2
121-125	0
126-130	2
Total	148

Mean = 89.20

S.D. = 14.15

2. Female Teachers

Scores O.I.	No. of Teachers f.
66-70	1
71-75	2
76-80	2
81-85	5
86-90	2
91-95	2
96-100	3
101-105	4
105-110	1
Total	22

Mean = 90.05

S.D. = 11.15

APPENDIX VIII

Frequency distribution of teachers towards Innovation - Area-wise

1. Teachers below 30 years

Scores C.I.	No. of Teachers f.
66-70	6
71-75	7
76-80	4
81-85	8
86-90	7
91-95	3
96-100	14
101-105	15
106-110	5
111-115	1
116-120	0
121-125	0
126-130	1
Total	71

Mean = 91.30

S.D. = 13.50

2. Teachers between 31-40 years

Scores C.I.	No. of Teachers f.
46-50	2
51-55	1
56-60	0
61-65	4
66-70	2
71-75	3
76-80	9
81-85	11
86-90	4
91-95	13
96-100	11
101-105	4
106-110	4
111-115	0
116-120	1
121-125	0
126-130	1
Total	70

Mean = 87.15

S.D. = 15.05

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3. Teachers between 41-50 years

Scores C.I.	No. of Teachers f.
71-75	2
76-80	2
81-85	3
86-90	3
91-95	1
96-100	3
101-105	1
106-110	0
111-115	1
Total	17
Mean	= 87.10
S.D.	= 12.10

4. Teachers above 50 years

Scores C.I.	No. of Teachers f.
56-60	1
61-65	0
66-70	0
71-75	1
76-80	1
81-85	1
86-90	3
91-95	4
96-100	1
101-105	0
106-110	2
111-115	0
116-120	1
Total	15
Mean	= 91.00
S.D.	= 15.90

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APPENDIX IX.A

[illegible]

1. Trained Teachers

Scores G.I.	No. of Teachers f.
46-50	2
51-55	1
56-60	0
61-65	4
66-70	6
71-75	9
76-80	13
81-85	14
86-90	10
91-95	17
96-100	19
101-105	11
106-110	6
111-115	2
116-120	1
121-125	0
126-130	1
Total	116

Mean = 88.08

S.D. = 14.40

2. Untrained Teachers

Scores G.I.	No. of Teachers f.
56-60	1
61-65	1
66-70	2
71-75	4
76-80	4
81-85	9
86-90	2
91-95	4
96-100	10
101-105	8
106-110	5
111-115	0
116-120	1
121-125	0
126-130	1
Total	52

Mean = 91.25

S.D. = 14.45

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APPENDIX XX B

Frequency distribution of teachers' morale according to their academic qualifications

1. Post-graduate Teachers

Scores C.I.	No. of Teachers f.
61-65	2
66-70	3
71-75	1
76-80	1
81-85	4
86-90	3
91-95	2
96-100	3
101-105	3
106-110	2
Total	24

Mean = 86.75

S.D. = 8.30

2. Science Graduates

Scores C.I.	No. of Teachers f.
46-50	1
51-55	1
56-60	0
61-65	0
66-70	3
71-75	6
76-80	7
81-85	8
86-90	6
91-95	6
96-100	12
101-105	10
106-110	3
111-115	0
116-120	1
Total	64

Mean = 88.86

S.D. = 13.80

3. Arts Graduates

Scores C.I.	No. of Teachers f.
46-50	1
51-55	0
56-60	1
61-65	3
66-70	2
71-75	5
76-80	8
81-85	11
86-90	5
91-95	13
96-100	14
101-105	7
106-110	7
111-115	2
116-120	1
121-125	0
126-130	2
Total	82

Mean = 90.62

S.D. = 15.45

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APPENDIX X

Frequency distribution of teachers towards innovation - knowledge idea

1. Teachers below 5 years experience

Scores O.I.	No. of Teachers f.
46-50	1
51-55	0
56-60	0
61-65	1
66-70	5
71-75	5
76-80	3
81-85	13
86-90	5
91-95	3
96-100	12
101-105	8
106-110	5
111-115	0
116-120	0
121-125	0
126-130	2
Total	63

Mean = 90.40

S.D. = 13.15

2. Teachers between 6-10 years experience

Scores O.I.	No. of Teachers f.
66-70	2
71-75	4
76-80	5
81-85	1
86-90	3
91-95	4
96-100	7
101-105	8
106-110	1
111-115	1
Total	36

Mean = 90.80

S.D. = 9.85

3. Teachers between 11-15 years experience

Scores O.I.	No. of Teachers f.
46-50	1
51-55	1
56-60	0
61-65	3
66-70	0
71-75	0
76-80	3
81-85	3
86-90	5
91-95	4
96-100	6
101-105	2
106-110	1
111-115	0
116-120	2
Total	33

Mean = 87.55

S.D. = 16.35

4. Teachers between 16-20 years experience

Score S.I.	No. of Teachers f.
61-65	1
66-70	1
71-75	2
76-80	3
81-85	2
86-90	0
91-95	6
96-100	4
101-105	1
106-110	2
111-115	1
Total	23

Mean = 90.50

S.D. = 13.15

5. Teachers above 20 years experience

Score S.I.	No. of Teachers f.
56-60	2
61-65	0
66-70	0
71-75	2
76-80	1
81-85	2
86-90	2
91-95	4
96-100	0
101-105	1
106-110	2
Total	12

Mean = 90.33

S.D. = 13.80

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Frequency distribution of teachers towards inspection - subject wise

1. Science Teachers

Scores	No. of teachers f.
46-50	1
51-55	1
56-60	0
61-65	0
66-70	3
71-75	6
76-80	6
81-85	8
86-90	10
91-95	8
96-100	13
101-105	12
106-110	3
111-115	1
116-120	1
Total	73

Mean = 89.65

S.D. = 13.45

2. Humanities Teachers

Scores	No. of teachers f.
46-50	1
51-55	0
56-60	0
61-65	4
66-70	3
71-75	4
76-80	6
81-85	11
86-90	2
91-95	6
96-100	6
101-105	2
106-110	3
111-115	1
116-120	1
121-125	0
126-130	2
Total	52

Mean = 86.85

S.D. = 16.50

3. Language Teachers

Scores	No. of teachers f.
56-60	1
61-65	1
66-70	2
71-75	3
76-80	3
81-85	4
86-90	3
91-95	7
96-100	10
101-105	6
106-110	5
Total	45

Mean = 91.00

S.D. = 12.90

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APPENDIX II

[illegible] on of teachers towards inspection =

1. Bellari District

Scores S.I.	No. of teachers f.
46-50	2
51-55	1
56-60	1
61-65	2
66-70	7
71-75	8
76-80	7
81-85	15
86-90	6
91-95	9
96-100	17
101-105	15
106-110	7
111-115	1
116-120	0
121-125	0
126-130	1
Total	99

Mean = 88.95

S.D. = 15.05

2. Gulburga District

Scores S.I.	No. of teachers f.
61-65	2
66-70	1
71-75	7
76-80	7
81-85	8
86-90	9
91-95	12
96-100	11
101-105	5
106-110	5
111-115	1
116-120	2
121-125	0
126-130	1
Total	71

Mean = 89.90

S.D. = 11.05

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APPENDIX XXII

Frequency distribution of teachers' general intelligence - Management wise

1. Government

Scores C.I.	No. of teachers f.
61-65	3
66-70	2
71-75	2
76-80	5
81-85	7
86-90	7
91-95	9
96-100	6
101-105	7
106-110	4
111-115	2
Total	54

Mean = 90.04

S.D. = 12.75

2. Local Bodies

Scores C.I.	No. of Teachers f.
46-50	2
51-55	1
56-60	0
61-65	1
66-70	3
71-75	4
76-80	6
81-85	9
86-90	2
91-95	7
96-100	8
101-105	6
106-110	0
111-115	0
116-120	0
121-125	0
126-130	1
Total	50

Mean = 84.80

S.D. = 15.15

3. Private Managements

Scores C.I.	No. of Teachers f.
56-60	1
61-65	1
66-70	3
71-75	7
76-80	5
81-85	7
86-90	6
91-95	5
96-100	14
101-105	7
106-110	7
111-115	0
116-120	2
121-125	0
126-130	1
Total	66

Mean = 91.10

S.D. = 14.30

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APPENDIX XIV

Individual total scores obtained by 170 secondary school teachers towards innovation as a whole

99	87	104	79	81	105	102	69	99	94	88	71
82	84	86	74	91	81	93	74	73	53	47	83
97	88	89	10	102	100	103	108	107	103	87	100
93	9	73	72	91	84	88	87	94	111	94	82
91	76	78	119	103	97	100	91	79	70	88	99
83	89	102	82	101	90	70	69	87	101	100	106
103	61	103	66	127	97	103	91	96	63	85	85
83	81	85	84	97	81	78	76	71	76	76	70
47	64	77	108	100	112	94	101	81	92	94	97
99	71	76	82	85	63	95	117	71	106	91	130
61	81	97	90	74	102	71	99	107	101	83	94
82	58	82	92	75	68	97	102	101	91	98	94
109	98	96	86	69	92	74	108	70	106	77	76
99	63	105	103	83	107	97	92	83	92	87	96
96	97										

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